

ABSTRACT

The present invention relates to an apparatus for detection of radiation comprising a photocathode layer adapted to release photoelectrons in dependence on incident radiation; a radiation entrance arranged such that a beam of radiation can be entered into the apparatus through said radiation entrance and can impinge on said photocathode layer at grazing incidence; an electron avalanche amplifier adapted to avalanche amplify photoelectrons released from said photocathode layer; and a readout arrangement adapted to detect avalanche amplified electrons from said amplifier. The invention further relates to a corresponding method for detection of ionizing radiation and to an arrangement for use in planar beam radiography comprising the detector apparatus.

(Fig. 1 suggested for publication)